WHAT IS CLAIMED IS:

(1) A braking system for use within a vehicle having a first pair of wheels which is selectively driven by an electric machine, and a second pair of wheels, said braking system comprising:

a first portion which selectively provides a regenerative braking function at said first pair of wheels; and

a second portion which is communicatively connected to said first portion and which selectively provides an antiskid braking function at said first and second pair of wheels, said second portion being effective to detect antiskid braking events at each of said wheels, and which communicates a signal to said first portion, effective to selectively disable said regenerative braking function only if an antiskid braking event is detected at either of said first pair of wheels.

(2) The braking system of claim 1 wherein said first portion comprises a motor control module which is communicatively coupled to said electric machine.

(3) The braking system of claim 2 wherein said vehicle further comprises an electrical power source which is connected to said electric machine and selectively receives electrical power from said electrical machine when said first portion provides said regenerative braking function, said first portion being further

effective to detect when said electrical power source is fully charged and to selectively disable said regenerative braking function in response to said detection.

(4) The braking system of claim 3 wherein said vehicle comprises a hybrid electric vehicle.

(5) The braking system of claim 1 wherein said second portion comprises a first pair of friction braking assemblies which are operatively attached to said first pair of wheels and which selectively provide a braking force to said first pair of wheels; and a second pair of friction braking assemblies which are operatively attached to said second pair of wheels and which selectively provide a braking force to said second pair of wheels.

(6) The braking system of claim 1 wherein said first portion is communicatively coupled to said second portion by use of a CAN bus.

(7) The braking system of claim 6 further comprising an auxiliary bus which communicatively couples said first portion to said second portion.

(8) A braking system for use within a vehicle having a first pair of wheels which is selectively driven by an electric machine, and a second pair of wheels, said braking system comprising:

a regenerative braking system which is

communicatively coupled to said electric machine and which selectively causes said electric machine to provide a regenerative braking function at said first pair of wheels; and

a friction braking system which is communicatively connected to said regenerative braking system and which selectively provides friction braking at said first and second pair of wheels, said friction braking system being effective to detect antiskid braking events at each of said wheels and to selectively provide an antiskid braking function at each of said wheels where said antiskid braking events are detected, said friction braking system being further effective to communicate a signal to said regenerative braking system effective to disable said regenerative braking function only if said antiskid braking event is detected at either of said first pair of wheels.

(9) The braking system of claim 8 wherein said friction braking system comprises a first pair of friction braking assemblies which are operatively attached to said first pair of wheels and which selectively provide a braking force to said first pair of wheels; and a second pair of friction braking assemblies which are operatively attached to said second pair of wheels and which selectively provide a braking force to said second pair of wheels.

(10) The braking system of claim 8 wherein said regenerative braking system is communicatively coupled to said friction braking system by use of a can bus.

(11) The braking system of claim 10 further comprising an auxiliary bus which communicatively couples said regenerative braking system and said friction braking system.

(12) The braking system of claim 8 wherein said vehicle further comprises an electrical power source which is connected to said electric machine and selectively receives electrical power from said electrical machine when said regenerative braking system provides said regenerative braking function, said regenerative braking system being further effective to detect when said electrical power source is fully charged and to selectively disable said regenerative braking function in response to said detection.

(13) The braking system of claim 12 wherein said electrical power source comprises a battery.

(14) A method for braking within a vehicle having a first pair of wheels and a second pair of wheels, a regenerative braking system which selectively provides a braking force to said first pair of wheels and an antiskid braking system which selectively provides a friction braking force to said first and second pair of wheels, said method comprising the steps of:

detecting an antiskid braking event;

determining whether said antiskid braking event is occurring at either of said first pair of wheels; and

selectively disabling said regenerative braking system only if said antiskid braking event is occurring at either of said first pair of wheels.

(15) The method of claim 14 wherein said vehicle comprises a battery, said method further comprising the steps of:

determining a state of charge of said battery; and

selectively disabling said regenerative braking system if said state of charge of said battery is substantially full.

(16) The method of claim 15 wherein said regenerative braking force and said friction braking force combine to provide a total braking force, said method further comprising the steps of:

reducing the ratio of said regenerative braking force to said total braking force, effective to improve braking feel consistency.

(17) The method of claim 16 wherein said regenerative braking force is reduced to approximately twenty percent of said total braking force.

(18) The method of claim 17 wherein said regenerative braking system is communicatively coupled to said antiskid braking system by use of a CAN bus, said method

further comprising the steps of:

providing an auxiliary bus; and

selectively coupling said regenerative braking system and said antiskid braking system together by use of said auxiliary bus.